

Title (en)

RATE ADAPTIVE CARDIAC PACING SYSTEMS AND METHODS

Title (de)

RATENADAPTIVE HERZSCHRITTMACHERSYSTEME UND VERFAHREN

Title (fr)

SYSTÈMES ET PROCÉDÉS DE STIMULATION CARDIAQUE À STIMULATION ADAPTATIVE

Publication

**EP 2122521 B1 20190123 (EN)**

Application

**EP 07855250 A 20071219**

Priority

- US 2007088042 W 20071219
- US 61374006 A 20061220

Abstract (en)

[origin: US2008154139A1] The invention relates to cardiac rhythm management systems, and more particularly, to rate adaptive cardiac pacing systems and methods. In an embodiment, the invention includes a method for providing rate-adaptive cardiac pacing therapy from an implantable medical device, the method including sensing a pulmonary function of a patient; determining a rate of change in the pulmonary function; sensing a cardiac function of the patient; determining a rate of change in the cardiac function; and calculating a target pacing rate based on an existing pacing rate, the rate of change in the pulmonary function, and the rate of change in the cardiac function. In an embodiment, the invention includes a method of controlling a cardiac rhythm management device in response to exertion of a patient, the method including sensing the patient's pulmonary function at a first time  $t_{SUB>1</SUB>}$  and at a second time  $t_{SUB>2</SUB>}$ ; calculating a rate of change of the pulmonary function between time  $t_{SUB>1</SUB>}$  and time  $t_{SUB>2</SUB>}$ ; sensing the patient's cardiac function at time  $t_{SUB>3</SUB>}$  and  $t_{SUB>4</SUB>}$ ; calculating a rate of change of the cardiac function between time  $t_{SUB>3</SUB>}$  and time  $t_{SUB>4</SUB>}$ ; and setting a desired pacing rate. Embodiments of the invention also include cardiac rhythm management devices.

IPC 8 full level

**G16H 20/30** (2018.01)

CPC (source: EP US)

**A61N 1/36585** (2013.01 - EP US); **G16H 20/40** (2017.12 - EP US); **G16H 40/67** (2017.12 - EP US)

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US 6839593 B1 20050104 - SUN WEIMIN [US], et al

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DOCDB simple family (application)

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